

<b>Notice of Allowability</b>	Application No.	Applicant(s)
	10/043,287	OGASAWARA ET AL.
	Examiner P. Agustin	Art Unit 2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to the request for reconsideration dated May 1, 2006.
2.  The allowed claim(s) is/are 1-20.
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
 of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of
 Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

## **DETAILED ACTION**

1. Claims 1-20 are now pending.

### ***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Paul Fournier on May 15, 2006.

The application has been amended as follows:

On Brief Description of the Drawings for Figures 1-4 on page 7, lines 3, 5, 7 & 9: --in accordance with the related art-- has been added before the semicolons.

### ***Drawings***

3. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: Figures 1-4 should be labeled as --Related Art--. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

### ***Allowable Subject Matter***

4. Claims 1-20 are allowed over the prior art of record.
5. The following is an examiner's statement of reasons for allowance:

The closest prior art of record, Nagano (JP 10-106018) (please refer to the machine translation), discloses: in claim 1, an optical pickup device (Drawing 1) driven by an error signal comprising: a grating element (42) for receiving a light beam to create zero order diffracted light,

± first order diffracted light and ± second order diffracted light when the light beam passes through the grating element (paragraph 0022, lines 3-5); an optical system (50, 52 & 54) for focusing the zero order, ± first order and ± second order diffracted light on a recording surface of an optical recording medium (12) so as to form a spot of the zero order diffracted light (Drawing 3, element 44a) on a first track (56) extending on the recording surface, spots of the ± second order diffracted light (47a & 48a) on tracks adjacent to the first track (58 & 60), and spots of the ± first order diffracted light (45a & 46a) between the spot of the zero order diffracted light and the spots of the ± second order diffracted light (as shown in Drawing 3); and an optical detector (66) having first to fifth independent light-receiving elements (70, 72, 74, 76 & 78), the first light-receiving element (70) being adapted to receive returning light (44b) from the spot of the zero order diffracted light (44a), the second and third light-receiving elements (72 & 74) being adapted to receive returning light (45b & 46b) from the spots of the ± first order diffracted light (45a & 46a), and the fourth and fifth light-receiving elements (76 & 78) being adapted to receive returning light (47b & 48b) from the spots of the ± second order diffracted light (47a & 48a).

However, as shown in Drawing 1 of Nagano, only the spots of the zero order diffracted light and the ± first order diffracted lights are utilized to form an error signal (note outputs of element 66).

Nagano does not teach, in regard to claim 1, an optical detector having first to fifth independent light-receiving elements, the first light-receiving element being adapted to receive returning light from the spot of the zero order diffracted light, the second and third light-receiving elements being adapted to receive returning light from the spots of the ± first order diffracted light, and the fourth and fifth light-receiving elements being adapted to receive returning light from the spots of the ± second order diffracted light, to produce output signals used to create an error signal.

Claim 12 has limitations similar to those of claim 1.

Claims 2-11 & 13-20 are dependent upon allowed base claims.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

7. Applicant's arguments filed May 1, 2006, with respect to claims 1-20 have been fully considered and are persuasive; therefore, the rejections have been withdrawn.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Higashihara (JP 02172047 A) discloses a disk recording and reproducing device using five beams (see Drawing 2) wherein a zero order diffracted light is irradiated on a track  $T_n$ ,  $\pm$ second order diffracted lights are irradiated on adjacent tracks ( $T_{n+1}$  &  $T_{n-1}$ ), and  $\pm$ first order diffracted lights are irradiated in between the zero and the  $\pm$ second order diffracted lights.

However, as shown in Drawing 6, error signals are calculated using only three of the five beams.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. L. Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 2627



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